Amendments to the Claims

1-16. (cancelled)

17. (currently amended) A device for heat treating a cast, homogenized metallic extrusion block immediately before it is fed into an extruder, comprising

a heating device configured to heat the block to an elevated temperature; and

a cooling device configured to receive the heated extrusion block in a stationary horizontal orientation in a spraying area having a horizontal axis;

wherein the cooling device includes cooling fluid spray nozzles for rapidly cooling the stationary heated extrusion block, the spray nozzles surround the spraying area, the nozzles have axes directed radially inwardly in relation to the horizontal axis of the spraying area, the spray nozzles are arranged in groups that are axially disposed along the horizontal axis of the spraying area at respective axially spaced locations, and the nozzles in each group at the respective axially spaced location collectively surround the spraying area; and

a process control system ~~for causing the block to be held axially stationary relative to the spray nozzles and~~ for sequentially switching off the groups of spray nozzles while the block is held axially stationary relative to the spray nozzles.

18. (previously presented) A device as set forth in claim 17, wherein the process control system operates at least some of the nozzles at different pressures than other nozzles.

19. (previously presented) A device as set forth in claim 18, wherein the process control system operates the nozzles individually or in groups at different pressures.

20. (previously presented) A device as set forth in claim 17, including a transport configured to transport the cooled block from the cooling device to an

extruder, and the process control system causes the transport to transport the cooled block from the cooling device to the extruder for a period of time permitting temperature equalization of the cooled block.

21. (previously presented) A device as set forth in claim 20, wherein the cooling device and transport device are controlled by the process control system to spray the block for a spraying period of time, the transport is controlled by the process control system to transport the block for a temperature equalization period of time, which temperature equalization period is longer than the nozzle spraying period.

22. (previously presented) A device as set forth in claim 20, wherein the spraying period is not greater than 30 seconds

23. (previously presented) A device as set forth in claim 17, wherein the heating device includes recuperation burners in which a recuperator for preheating the combustion air is individually integrated into each burner respectively.

24. (previously presented) A device as set forth in claim 23, wherein the recuperation burners include that are fitted with dies made of a material with high temperature stability, to alter the cross-section of the burner jets.

25. (currently amended) A device as set forth in claim 17, wherein each group of nozzles ~~are disposed in annular arrangements~~ is formed by a respective cooling ring.

26. (previously presented) A device as set forth in claim 17, including a block holder controlled by the process control system to hold the block stationary in the spraying area as the block is cooled by spray from the nozzles.

27. (previously presented) A device as set forth in claim 26, wherein the holder includes a clamp configured to grip facing sides of the block and which can be set to various bolt lengths.

28. (previously presented) A device as set forth in claim 27, wherein the clamp is movable horizontally between the spraying area and a block loading/unloading position.

29. (previously presented) A device as set forth in claim 17, further comprising a second cooling device, and the cooling devices are configured to operate in parallel.

30. (previously presented) A device as set forth in claim 17, wherein a pressure accumulator is connected to the nozzles for the supply of cooling fluid thereto.

31. (previously presented) A device as set forth in claim 17, wherein the groups of nozzles are caused to be switched off by the process control system in sequence beginning at one end of the block, such that the cooling time varies along the length of the block thereby to provide a temperature taper.

32. (currently amended) A device as set forth in claim ~~17~~ 25, ~~wherein nozzles in each group are disposed in an annular arrangement~~ wherein flow of cooing fluid to each cooling ring is caused to be switched off by the process control system in sequence beginning at one end of the block, such that the cooling time varies along the length of the block thereby to provide a temperature taper.

33. (currently amended) A device as set forth in claim ~~17~~ 32, including a block holder controlled by the process control system to hold the block stationary in the spraying area as the block is cooled by spray from the nozzles.

34. (previously presented) A device as set forth in claim 33, wherein the block holder includes a clamp having a fixed jaw and a movable jaw, the movable jaw being operable to accommodate blocks of different lengths while the fixed jaw defines a known position in relation to the groups of nozzles.

35. (previously presented) A device as set forth in claim 33, wherein the block holder covers the end faces of the block to screen the end faces from cooling spray whereby the heat in the block flows radially even at the ends of the block.

36. (currently amended) A cooling device for providing a heated block with a temperature taper prior to being fed into an extruder, comprising

a spraying area having a horizontal axis;

cooling fluid spray nozzles for rapidly cooling the block when held stationary in the spraying area, the spray nozzles surrounding the spraying area and being arranged in groups that are axially disposed along the horizontal axis of the spraying area at respective axially spaced locations, and the nozzles in each group at the respective axially spaced location collectively surround the spraying area; and

a process control system for sequentially switching off the groups of spray nozzles while the block is held axially stationary relative to the spray nozzles, thereby to provide the temperature taper.

37. (currently amended) A device as set forth in claim 36, wherein each group of nozzles ~~in each group are disposed in an annular arrangement~~ is formed by a respective cooling ring.

38. (previously presented) A device as set forth in claim 36, including a block holder configured to hold the block stationary in the spraying area as the block is cooled by spray from the nozzles.

39. (previously presented) A device as set forth in claim 38, wherein the block holder includes a clamp having a fixed jaw and a movable jaw, the movable jaw being operable to accommodate blocks of different lengths while the fixed jaw defines a known position in relation to the groups of nozzles.

40. (previously presented) A device as set forth in claim 38, wherein the block holder covers the end faces of the block to screen the end faces from cooling spray whereby the heat in the block flows radially even at the ends of the block.

41. (new) A cooling device for providing a heated block with a temperature taper prior to being fed into an extruder, comprising

a spraying area having a horizontal axis;

a plurality of cooling rings disposed along the horizontal axis of the spraying area at respective axially spaced locations, each cooling ring including cooling fluid spray nozzles for rapidly cooling the block when held stationary in the spraying area, the spray nozzles of each cooling ring collectively surrounding the spraying area at the respective axially spaced location; and

a process control system for controlling at least one of the selective turning on and off flow of cooling fluid to the cooling rings and the selective control of the pressure of the cooling fluid supplied to the cooling rings while the block is held axially stationary relative to the spray nozzles, thereby to provide a desired temperature taper to the block.